



National Search And Rescue Committee

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Department of Defense
Department of Interior
Department of Commerce
Department of Transportation
Department of Homeland Security
Federal Communications Commission
National Aeronautics and Space Administration

MINUTES

Regular Session 03-09
December 3, 2009
U. S. Coast Guard Headquarters
Washington, DC 20593-0001

1. Introductory Remarks

The meeting was convened by NSARC's new Chair, RADM Paul Zukunft (USCG). Enclosure (1) lists the attendees.

The Chair welcomed everyone and noted the attendance of Mr. Ed Frothingham of the Defense Prisoner of War/Missing Personnel Office (DPMO) whom he had worked with in the past. He also greeted LCDR Tom Zounczyk (OSD/DPMO) as the new NSARC member for DOD, and welcomed Mr. Dan Hourihan (NASAR) who had traveled from Alaska to attend the meeting.

The Chair mentioned his background in counter-drug and counter-terrorism operations which he had conducted when assigned with the U.S. Pacific Command (USPACOM) and later as Commander, Coast Guard District 11.

He continued by giving some examples to illustrate the hazards and challenges of SAR operations, and mentioned problems with hoax calls, especially in the San Francisco Bay Area. He recalled a case where a person in the water died of hypothermia after his fishing vessel was hit by a merchant ship, and another case where no distress call had been received and two lives were lost.

The Chair emphasized the need for technologies that will enable shrinkage of search areas, spoke favorably of Cospas-Sarsat, and noted the valuable contributions of Rescue 21 which is being deployed to provide coastal radio coverage for the Coast Guard.

The Chair further noted the importance of the Amver ship reporting system for SAR, added that the Arctic is a growing area of interest for SAR, and recalled the accident that had occurred on October 29th off San Diego when a Coast Guard C-130 and Marine Corp helicopter collided claiming seven Coast Guard and two marine lives.

He ended his opening remarks by expressing pleasure at the opportunity to serve with the Committee, and offering to support the Committee when he can.

2. Approval of Minutes

The Committee approved the minutes of its July 23, 2009 meeting.

3. Member Agency Reports

a. Department of Commerce

Mr. Ajay Mehta (NOAA) reviewed highlights of the 43rd Session of the Cospas-Sarsat Council that had convened in October. An agreement on geostationary satellite coverage over Europe is expected to be concluded in October 2010 with EUMETSAT. Nearly 2,000 rescues supported worldwide by Cospas-Sarsat in 2008, and the beacon population is projected to reach 961,000 by the end of 2010. The timeline for implementing the medium Earth orbiting satellite system for SAR (MEOSAR) is being developed to enhance Cospas-Sarsat capabilities, and a companion effort is beginning to develop new beacons to take advantage of MEOSAR. Mr. Mehta talked about the Cospas-Sarsat meetings scheduled for 2010, one of which would be an Expert Working Group on Beacon Modernization in September in Washington, DC, to be chaired by CAPT David McBride (USCG).

Mr. Mehta commented on a case that had involved loss of lives aboard the Fishing Vessel Lady Mary, and the work of NOAA to address beacon registration issues associated with that case. NOAA had commissioned an independent review team that made 43 recommendations for improving registration, including one about third parties, such as Coast Guard inspectors and National Park Service rangers, helping to validate registration information. He invited the Committee to help identify contacts for NOAA to work with on this recommendation, and said that the Federal Aviation Administration and the standards organization RTCA might be able to help with others. NOAA is requesting funds to help improve the registration database.

CAPT McBride added that in the process of validating beacon registrations, 64 of the 74 registration errors discovered had been due to errors made by beacon owners during registration.

b. National Aeronautics and Space Administration

Mr. Dave Affens (NASA) said that NASA's primary SAR focus is developing the Distress Alerting Satellite System (DASS) to become part of MEOSAR, which will use payloads on the Global Positioning System (GPS) satellites. Some satellites have already been launched with equipment that has been used for the DASS proof of concept.

NASA has also been assisting the military and recently participated in a successful Bold Quest exercise for which DASS signal processing performed very well.

Mr. Affens indicated that there are some available coding bits that might be used to support a return link capability for DASS if sufficient interest develops among the SAR agencies. In response to a question from the Chair, Mr. Affens explained that the return link would just be a small digital message of some type, that the capability would need to be demonstrated, that relay of information from those bits would have been much more timely than is now possible, and that there might be considerable problems to overcome to authorize the use of those bits for this purpose.

Mr. Roy Dreibelbis (NASA/MEI) commented about the continuing work of NASA on a 3D visualization tool intended to help find downed aircraft, especially in mountainous areas. The program will incorporate radar tracks and weather overlays with the assistance of AIMS research laboratory software programming. Terrain can be examined to help assess where an aircraft might have disappeared. A study has been conducted on where wreckage had been found in the past when the aircraft had been lost off radar; this information will also be used to improve the program. The project is under review by the Air Force and others for ideas on how to further enhance the tool's capabilities.

c. Department of Transportation

No report was available for DOT.

d. Department of Interior

Mr. Dean Ross (NPS) stated that the NPS had completed and staged three national SAR caches (at Nashville, Albuquerque, and the Grand Canyon) to support Indian SAR teams that will be comprised of 65 members each. The caches will be deployed by the Air Force when requested by tribes. The Park Service will begin training natives, including Alaskan natives, to support this effort beginning in March.

Non-conventional use of various small electronic devices continues to plague the Park Service; the devices are being used to call for help when no emergency exists, which has been quite costly to the Park Service. These notifications sometimes result in violation notices being written for interfering with Agency functions, causing the person responsible to have to appear before a magistrate.

DOI has begun using 'Safe Track' bidirectional programmable Iridium communications devices that have a distress button; the commercial versions of these will be available to the public. These devices can be used for tracking and for SAR.

The Federal Emergency Management Agency (FEMA) has been working on SAR Qualifications, which may not be well received when released for public comment; this deals with typing of SAR equipment, individuals and teams.

The Park Service has a new policy on aviation that incorporates National Transportation Safety Board (NTSB) air medical recommendations.

The President had designated the USS Constitution as the official Ship of State for events such as signings of maritime-related documents.

e. Federal Communications Commission

Mr. Darryl Smith (FCC) commented on the roles of the FCC as an independent Agency, tasked by the Communications Act, 1934 with regulating radio, television, wire, satellite, and cable communications. The FCC now also ensures continuous operations and reconstitution of critical communications systems and services.

The FCC's new Public Safety and Homeland Security Bureau handles activities related to public safety, homeland security, emergency management and preparedness, and disaster response. This Bureau has three divisions that handle policy, analysis, and

public communications and outreach; this last one handles much of the interagency liaison as well as support to FEMA.

The FCC is headed by five Commissioners who serve five-year terms with one rotation per year, and has 1,500 Headquarters personnel along with 500 others who work in 26 field offices.

The FCC operates an Operations Center and an HF Direction Finding Center, both on a 24-hour basis, and can deploy experts in various technical disciplines to support other government authorities with public safety, disaster response and recovery of communications.

The FCC also supports interagency planning for continuity of operations and government, and for pandemics.

The FCC has been revamping spectrum taken from broadcasters in the 700 and 800 MHz bands for private and public use, and has a new initiative to make broadband available throughout the United States.

The Chair emphasized that spectrum management is critical and challenging.

f. Department of Defense

Mr. Dan Baumgartner (DPMO) reported that DOD is implementing a new national policy on personnel recovery, of which civil SAR is a subset. DOD is developing agreements with Customs and many other agencies to share its Personnel Recovery capabilities.

The President had signed a new National Security Presidential Directive (NSPD) that covers U.S. citizens taken hostage abroad, any American abroad that is at risk.

DOD and the State Department are training country teams for Personnel Recovery. Most countries do not have those capabilities, a concern to DOD; developing host nation capabilities is a key effort now.

Current DOD initiatives include coordinating a new Directive on Defense Support of Civil Authorities, pushing SAR policies with the NATO SAR Panel, and starting a Joint Integration Technical Group which will deal with how to report missing persons and how to maintain a better common operating picture.

DOD is replacing much of its aging aircraft rescue fleet, with acquisitions of about 170 HC-130M aircraft.

The U.S. Northern Command (USNORTHCOM) now has responsibility for DOD's civil and catastrophic SAR missions, but still needs to develop requirements and obtain assets for them.

The Chair noted that DOD assets had proven valuable for SAR in the Pacific, and that Agencies are struggling with the fuzzy delineation among terrorists, criminals and political aggressors.

Mr. David Fuhrmann (RCC Tyndall) advised that the Air Force rescue coordination center had stopped using its SARMaster software, and hopes to have new software by

April that it can share with the States. The Inland SAR Coordinator is now the 1st Air Force operating under USNORTHCOM.

Canada had submitted a report to the Cospas-Sarsat Council on the history of use of 406 MHz and other findings, which will be available via the NSARC Secretary (Mr. Rick Button or Ms. Willie Foster) for anyone interested.

Plans had been cancelled for the 1st Air Force to host the annual National Association for Search and Rescue (NASAR) conference; the meeting will now be in Mississippi.

Mr. Joe Sokol (USNORTHCOM) is the Chief, Personnel Recovery for his Command. He indicated that analysis is being conducted on the impact of the Command's association with the Inland SC role. Some decisions were expected to be made in December 2009 on more specific divisions of responsibilities for civil SAR among the commands involved.

Staffing had been approved for the Joint Personnel Recovery Center at Tyndall AFB, starting with four civilian billets and with military billets to be added later.

USNORTHCOM is continuing to review the concept of operations for supporting *Emergency Support Function 9, Search and Rescue* (ESF #9) under the *National Response Framework*.

In response to a question from the Chair on how to request pararescuemen SAR support, Mr. Sokol recommended going through RCC Tyndall.

Mr. John Salvador (CAP) mentioned a case for which RCC Tyndall had relayed a good 406 MHz alert to the Civil Air Patrol.

g. Department of Homeland Security

The Secretary reminded the Committee that Sarsat had been started by NASA and NSARC, and that work is continuing through DASS to move Sarsat equipment from NOAA satellites to the Global Positioning System (GPS) satellites. This effort is moving forward rapidly.

Coast Guard-led efforts on the DASS civil requirements via the Interagency Forum for Operational Requirements (IFOR) are complete, and in September, the Air Force Space Command had approved DASS as a civil requirement for GPS. Formal U.S. acceptance of Canada providing the satellite equipment is pending. Final approval is expected from the Joint Requirements Oversight Council (JROC in the 3rd quarter of FY12, but there are still several documents that must be completed before then. The Air Combat Command will be DOD's sponsor for DASS. Interagency responsibilities are being defined and NOAA had been working on a DASS Implementation Plan. The interagency cost analysis had been completed.

4. Working Group Reports

a. Research and Development

Mr. Affens (NASA) reported that the Group had met in October. During the meeting, LCDR Kathy Niles (USCG) had provided information on satellite emergency notification devices (SENDS), and the NPS had reported on its SAR activities.

b. Satellite Emergency Notification Device

LCDR Niles had been heading up this Group which had its first meeting planned for December 11th.

CAPT McBride stated that RTCM had established a Special Committee (SC) to work on SEND requirements, and that the NSARC Group would focus more on associated SAR policies and procedures. There had been a Coast Guard SAR case involving an OnStar alert, and he asked whether any other entities had similar experiences.

Mr. Ross added that the amount of remote car control OnStar provides varies depending on the brand of car it is installed on.

c. Mass Rescue Operations

The Secretary said that this Group had been discontinued, and that matters related to MROs would be handled as necessary by the Correspondence Working Group; however, the MRO Group could always be re-established if necessary.

d. Correspondence

The Secretary provided the following updates:

- The *Catastrophic Incident Search and Rescue Addendum* (CISAR Addendum) had been finalized and posted on the Committee's web site;
- A draft *Inland Search and Rescue Addendum* had been completed and was being edited in preparation for the Group to review;
- The revised ESF #9 rewrite had been completed and is pending FEMA approval (it is the first ESF Annex to the NRF to be revised);
- The *National Search and Rescue Supplement* to the *International Aeronautical and Maritime Search and Rescue Manual* (IAMSAR Manual) is being revised; and
- A *Legal Addendum* is also being developed that will address a lot of international issues, statutory authorities, and other important topics.

Relevant Meetings and Activities

a. Civil Air Patrol

Mr. John Salvador reported that CAP is a great force multiplier that only costs \$132/hour for aircraft time. Even though the number of SAR hours CAP flew in FY09 was down 24 percent from the previous year (most likely due to the termination of 121.5 satellite monitoring) CAP's missions grew by 11 percent overall in other areas to more than compensate. CAP ended up flying a total of 112,000 hours in FY09, 81,000 of these hours were on various AF missions. CAP was credited with saving 72 lives in FY09.

CAP now supports the US Army and the US Marines with predeployment Predator operations training during Green Flag exercises using a specially modified Surrogate Predator aircraft. Missions began in Alexandria, Louisiana in October and will begin in late FY10 in southern California and Nevada. The Predator training CAP is providing to the Army and Marines is extremely beneficial. The soldiers and Marines

are now better prepared to work with Predator aircraft when they deploy to Afghanistan and Iraq. AFNORTH is also excited about expanding this capability to more aircraft. They would eventually like to equip a total of 20 CAP aircraft with a similar full motion video and IR sensor package that could be used on SAR and other Defense Support to Civil Authorities (DSCA) missions.

Mr. Salvador then spent several minutes talking about the importance of using radar and cell phone forensics to help in both missing aircraft and missing person searches. He gave several examples of how important these technology tools can be in prosecuting searches. One example was a recent case in which a CAP radar specialist worked with a CAP cell phone specialist to narrow down a very large search area and successfully located the overdue aircraft in West Virginia; it had been on a flight from Texas to Virginia with no flight plan. CAP handled 26 cell phone SAR cases in 2008 and 45 in 2009. CAP's radar and cell phone data analysis efforts directly contributed to saving 10 lives in 2009.

Mr. Salvador also said it is very important to have a good relationship established ahead of time with all the various cell phone companies and it is critical to only have a single agency requesting data for the same case. He discussed how cell phone data is reviewed to determine high probability search areas. Phones usually survive crashes, and whenever they are on, data is normally available. A call to the phone in a crashed aircraft can sometimes provide data for analysis, such as the nearest cell tower location. Mr. Salvador closed by reviewing other cases where cell phone and radar forensics had helped; one involved four persons rescued from a helicopter where radar data and text messages enabled the aircraft to be accurately located upside down in the Everglades in FL.

b. National Association for Search and Rescue

Mr. Dan Hourihan reported that NASAR is struggling with some of the same issues as other SAR entities, such as cost recovery (which it generally opposes), use of SENDs, and penalties for false calls for assistance. The main concern about SENDs is irresponsible use for non-emergencies. NASAR can help educate the public and SAR communities about SEND capabilities and limitations to help manage expectations.

The 2010 Annual NASAR Conference will take place May 13-15 in Tunica, MS, where the facilities are excellent and the cost reasonable. More information is available on NASAR's website. The Mississippi State SAR Coordinator will host a Federal-State SAR pre-conference on May 11-12.

Mr. Hourihan chairs the SAR sub-committee of the National Sheriff's Association, which would be meeting in Washington, DC, in January. Mr. Button will be briefing the meeting on matters of interest, especially the CISAR Addendum.

NASAR only gets about a 35% response from teams nationwide when trying to collect SAR statistics, so it would like to work through the State SAR Coordinators to more effectively collect available data for national purposes.

Mr. Furhmann suggested that the statistics might be more easily collected with RCC Tyndall's new software.

Mr. Ross commented that the NPS uses a system for SAR statistics that has a format designed for optimal data content.

c. National and International Activities

Mr. Dave Edwards (USCG) summarized selected activities as follows:

Recent Activities

- 16th session of the ICAO-IMO Joint Working Group on SAR (September 2009): The USCG and USAF provide two of the 16 total international maritime and aeronautical SAR experts on this Group; the Group is sponsored by and supports the International Civil Aviation Organization and the International Maritime Organization. These experts are largely responsible for the content of the IAMSAR Manual. The 16th session sent 14 recommendations to IMO and ICAO;
- Vietnam SAR Assessment (September 2009): The USCG provided SAR experts in support of USPACOM's theater engagement with Vietnam;
- Antarctic SAR Workshop (November 2009): The five nations encircling Antarctica met in support of Parties of the Antarctic Treaty to improve SAR capabilities, with the USCG and the National Science Foundation (NSF) representing U.S. interests; and
- Pacific Island Countries and Territories (PICT) (November 2009): The USCG hosted a biennial session for Australia, France, New Zealand and the United States, and supported by the Secretary of the Pacific Community, to advance SAR and other maritime safety issues with the island nations and territories.

Upcoming Activities

- Antarctic Treaty Meeting of Experts (ATME) (December 2009): The SAR portion of this meeting will focus on ship-borne tourism in the Antarctic Treaty area;
- IMO Communications, Search and Rescue Sub-committee: This is an important annual meeting for the Coast Guard. Anything international dealing with maritime SAR or with recommendations from the ICAO-IMO Joint SAR Working Group are discussed;
- SAR assessment of the Greek SAR system for future training and installation of the SAROPS search planning tool by USCG (March 2010);
- Antarctic Treaty Consultative Meeting (May 2010): Passenger ship SAR, IMO initiatives, and making a mandatory "Polar Code" for shipping will be considered at this meeting in Uruguay; and
- Global SAR Workshop (June 2010): The U.S. may participate in this event that will take place in the United Arab Emirates and that may result in consolidating some aeronautical SAR regions.

d. Radio Technical Commission for Maritime Services

Mr. Bob Markle (RTCM) provided updates on RTCM Committees of interest to NSARC, all of which would be meeting the week of December 14, 2009.

SC 101/110 that deals with emergency beacons is working on standards for GPS processors in VHF handheld radios; the efforts is in response to a regulatory proposal by the FCC on behalf of the Coast Guard that proposed a new marine VHF handheld radio with GPS. The Coast Guard may require carriage of such radios on commercial vessels without a fixed radio installation. A recent revision to the International Telecommunications Union Digital Selective Calling standard will help expedite this work.

On behalf of SC-110, RTCM has petitioned the FCC to update its PLB authorization process by referencing the new RTCM PLB standard. The Committee completed further refinement of PLB performance testing requirements to improve reliability of GPS position determination in beacons equipped for it (location protocol beacons), and expects the amendment to be adopted by RTCM in May.

SC-110 is also updating its EPIRB standard to be consistent with the latest revision of the Cospas-Sarsat beacon standards, make improvements in GPS processor testing (similar to PLBs), and provide for future use of Automatic Identification System (AIS) technology as a homing alternative to 121.5 MHz. The Committee is preparing for the next-generation of beacons to operate with DASS and other MEOSAR systems.

RTCM's new SC-128 deals with performance of SENDs, such as SPOT, had prepared a draft standard, and will be coordinating with the NSARC SEND Working Group.

e. Global Maritime Distress and Safety (GMDSS) Task Force

Mr. Jack Fuechsel (USCG, retired) advised that the Task Force had met on October 1, 2009, in Fort Myers, Florida, during the National Marine Electronic Association (NMEA) Annual Convention. The Task Force had reviewed the status of its initiative to encourage all vessels going a mile or more offshore to carry a VHF radio or distress beacon. This program originated with a Hawaiian law that was later endorsed by the National Association of State Boating Law Administrators (NASBLA) and the Task Force. The Task Force initiated a campaign to urge boaters to carry the appropriate equipment voluntarily.

Other Task Force activities included:

- Sending letters to 26 organizations interested in maritime safety to invite them to join in the campaign mentioned above, and giving briefings to several such organizations at their recent meetings;
- Noting that publicity about a SAR case involving football players lost off the west coast of Florida had reportedly triggered purchases that temporarily exhausted local supplies of EPIRBs and PLBs; and
- Presenting a paper at an e-navigation Conference in Seattle. Electronic navigation has become a hot topic since IMO mandated Electronic Charts for SOLAS vessels, and other e-navigation services such as brief text messaging are being deployed.

Text messaging may extend to distress alerting and SAR communications. GMDSS modernization will accommodate e-navigation services where possible.

Recognizing the good work that NOAA does in maintaining the SARSAT registration database, the Task Force would like the FCC to consider taking on a quality assurance role for databases associated with maritime mobile service identities (MMSIs).

Mr. Markle pointed out that the draft Coast Guard authorization act includes a change to give the Coast Guard authority to require EPIRB carriage on recreational vessels.

The next Task Force meeting was scheduled for January 7, 2010 at the RTCM.

9. Other Business

Mr. Ross, on behalf of the NPS, presented Mr. Button a certificate of appreciation for his excellent work as Secretary on development of ESF #9 and the CISAR Addendum, and in general for his professionalism and commitment to improving SAR.

Mr. Frothingham, on behalf of the Deputy Assistant Secretary of Defense over DPMO, also presented a certificate of appreciation to Mr. Button, noting that DPMO thinks highly of his contributions as Secretary.

Mr. Button responded by recognizing how satisfying it has been working with Agencies that have been so cooperative, and saying that he looks forward to continuing the work.

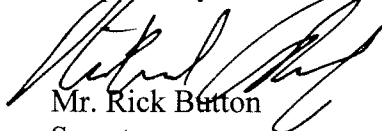
The Chair thanked everyone for participating in the meeting, noting that technology has developed a lot since NSARC's inception in May 1974, along with associated applications and challenges.

The Chair also thanked the Secretary and Ms. Foster for their support of the meeting.

10. Next Regular Meeting

The next NSARC general session was scheduled for April 15, 2010.

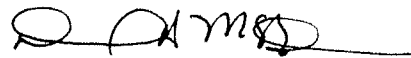
Respectfully submitted:


Mr. Rick Button
Secretary

Date: 4/2/10

Encl: (1) List of Attendees

Approved:


Captain Dave McBride
Alternate Chair, National SAR Committee

Enclosure (1)

National Search and Rescue Committee (NSARC)

Regular Session 3-09

December 3, 2009

LIST OF ATTENDEES

Names		Affiliations
AFFENS	Dave	NOAA
BAUMGARTNER	Dan	DOD/DPMO
BUTTON	Rick	USCG
CAIAFA	Mike	FCC
DREIBELBIS	Roy	CSC
EDWARDS	Dave	USCG
FOSTER	Willie	USCG
FROTHINGHAM	Ed	DOD/DPMO
FUECHSEL	Jack	GMDSS
FURHMANN	Dave	AFRCC
HOURIHAN	Dan	NASAR
LEMON	Dan	NOAA/CSC
LEVIN	Russ	USCG
MARKLE	Bob	RTCM
MCBRIDE	David, CAPT	USCG
MEHTA	Ajay	NOAA
MERRIGAN	Patrick	USNORTHCOM
ROSS	Dean	NPS
SALVADOR	John	HQ CAP
SCHUDA	Paul, Dr.	CAP
SOKOL	Joe	USNORTHCOM
SMITH	Darryl	FCC
SWAIN	John	CAP
THEODORAKOS	George	NASA/MEI
ZOUNCZYK	Tom, LCDR	DOD/DPMO